INDEX TO VOLUME XIX

The asterisk * preceding the page number indicates an original article in this Journal. The letter T preceding the page number indicates a paper reported in the Transactions of the American Association of Neuropathologists. The letter D preceding the page number indicates a discussion of an original article or some other item published in this Journal. The letter B preceding the page number indicates a book review. Subject entries are made for all articles. Author entries are made for original articles and Society Transactions.

Acute effects of methoxypyridoxine on hippocampal end-blade neurons; an experimental study of "special pathoclisis" in the cerebral cortex, *421
Adams, J. M., see Siem, R .A., *125
Adams, R. D., D141, D149, D151, D152
—, see Vander Eecken, H., T159
Alexander, G. L., E. G. Szekely, and E. A. Spiegel, effect of stimulation of the pallidum on experimental tegmental tremor in the cat, *116
Allergic encephalomyelitis, localization of, in lesions of cyanide encephalopathy, *238
Alvord, E. C., Jr., D152
—, see Shaw, Cheng-Mei, T166 D168
American association of neuropathologists, annual meeting, of, Atlantic City, N. J., T135
Amyloid vascular changes, combined with argyrophilic plaques in the central nervous system, *370
Anderson, F. O.; see DeBroske, J. M. F., *628
Anoxic-ischemic encephalopathy in rats, T165
Argyrophilic plaques in the central nervous system and combined amyloid vascular changes, *370
Aronson, B. E., see Aronson, S. M., T152
Aronson, S. M., and B. E. Aronson, intracranial vascular lesions in diabetes mellitus, T152
Aström, K. E., see Kjellin, K., *528
Astroglia, silver carbonate technique for the impregnation of, *622
Atlas level, cord damage at, as a pathogenic mechanism in cerebral concussion, *266
Atrophy of the cerebellar granular layer, in an adult with central nervous system lipidosis, *355
Audiogenic seizures in mice, a study of some physiological mechanisms underlying susceptibility to, *461
Awards, presentation of, to Armando Ferraro, and Arthur Weil, *1
Ayres, W. W. and W. Haymaker, xanthoma and cholesterol granuloma of the choroid plexus. Report of the pathological aspects in 29 cases, *280

Bailey, O.T., D158, D165
Balthasar, K. G., a case of subacute inclusion bodies encephalitis with marked pericapillary mieroglia-nodules, T162
Barlow, C. F., J. C. Schoolar, and L. J. Roth, the penetration of carbon-14 urea into various areas of the cat brain, T146
Barlow, C. F., see Schoolar, J. C. *216
Barron, K. D., and D. I. M. Fine, neuromyositis, T150
Barron, K. D., see Fine, D. I. M., *355
Basal ganglia surgery in man, involuntary movement disorders, following, *228
Baxter, D. W., and J. Olszewski, congenital universal insensitivity to pain, T153
Bear, Kamchatka, subacute polyradiculoneuritis, in a, *351
Bears, neurological diseases of, in captivity, *89
Bebin, J., see Sieracki, J. C., *70
Benda, C. E., D160
Benda, P., and G. L. Brownell, the fate of radioactive emboli injected into the cerebral circulation, the brain as a filter, *383
Bornstein, M. B., D140, D150, D155, D171
Book reviews B177, B320, B473, B630
Boron-containing drugs, evaluation of two for use in the proposed neutroncapture irradiation of gliomas, *415
Brain tumors, occurence of, in several members of a family, *528
Bravo, G., see Schachter, J. M., *228
Brownell, G. L., see Benda, P., *383
Brownson, R. H., the effect of x-irradiation on the perineuronal satellite cells in the cortex of aging brains, *407

Cammermeyer, J., a critique of neuronal hyperchromatosis, T141, D138, D139, D152, D169, D170
Carbon-14 urea, penetration of, into cerebrospinal fluid and various areas of the cat brain, *216
Case of subacute inclusion bodies encephalitis with marked pericapillary microglia-nodules, T162
Central nervous system involvement in Whipple's disease, *70
— lipidosis in an adult with atrophy of the cerebellar granular layer, *355

Cerebral thrombosis with sickle cell disease, T152
Cerebellar granular layer, atrophy of, in an adult with central nervous system lipidosis, *355
Cerebrospinal fluid, non-hemorrhagic xanthochromia of, *296
Chemical stimulation of telencephalon, diencephalon and mesencephalon in unrestrained animals, *581
Cholesterol granuloma and xanthoma of the choroid plexus, *280
Clarkson, T. B., see Netsky, M. G., T156
Clasen, R. A., P. Cooke, S. Tyler, and S. Pandolfi, changes in intracerebral sodium chloride and water associated with experimental cerebral edema, T164
—, D164
Cobalt 60 (gamma) radiation, a study of the pathologic findings in monkeys irradiated with massive doses of, *195
Cohen, R. B., see Romanul, F. C. A., T135
Combined amyloid vascular changes and argyrophilic plaques in the central nervous system, *370
Concentric lacunar leukoencephalopathy, T173
Concussion, cerebral, specific cord damage at the atlas level as a pathogenic mechanism in, *266
Congenital hypoplasia, unilateral, of the facial nucleus, *33
— universal insensitivity to pain, T153
Cooke, P., see Clasen, R. A., T164
Cooper, I. S., see Schachter, J. M., *228
Cord damage, specific, at the atlas level as a pathogenic mechanism in cerebral concussion, *266
Corpus callosum, lipoma of, *305
Cowen, D., see Potanos, J. N., T143
Cowen, D., and L. M., Geller, long-term pathological effects of prenatal x-irradiation on the central nervous system of the rat, *488
Crania, mongoloid, post mortem observations on, *554
Cravioto, H., see Feigin, I., T136, D145
—, and I. Feigin, localized cerebral gliosis with giant neurons histologically resembling tuberous sclerosis, *572
Crisp, L. P., see DeBroske, J. M. F., *628
Cruickshank, J. G., see Gresham, G. A., *342
Cyanide encephalopathy, localization of allergic encephalopathy, in lesions of, *238
Cysts, paraphyseal, of the third ventricle, *133
Cytochemical localization of oxidative enzymes in the human central and peripheral nervous systems, T143

DeBroske, J. M. F., F. O. Anderson, and L. P. Crisp, a new micromanipulator for neurophysiological microelectrode studies, *628
Degenerative disease of the corpus luysi, clinico-pathologic study of three cases, T161
— — of the subthalamic bodies, *96
Degenerating pyramidal tracts, quantitative study of gliosis, in *130
Dekaban, A. S., D153
Demmy, N., see Malamud, N., *96, T161
Demyelinating disease, primary, an unusual case of, *76
Demyelination, experimental, phase and electron microscopic studies of, *42
Diphtheritic polyneuritis in the rabbit and guinea pig, experimental study of, *7
Distribution of vacuolated neurons in brains of sheep affected with scrapie, *102
Dorand, L. A., and H. A. Matzke, the fate of a radio-opaque medium injected into the sciatic nerve, *25
Dreyfus, P. M., and M. Victor, the effects of thiamine deficiency on the nervous system: physical and biochemical studies in the rat, T170

Effect of stimulation of the pallidum on experimental tegmental tremor of the cat, *116
— of x-irradiation on the perineuronal satellite cells in the cortex of aging brains, *407
Effects of subarachnoid injections of iron-containing substances on the central nervous system, *433
— of thiamine deficiency on the nervous system: physical and biochemical studies in the rat, T170
Electron microscopic studies of experimental demyelination, *42
Emboli, radioactive, injected into the cerebral circulation, fate of, the brain as a filter, *383
Encephalomyelitis, allergic, in lesions of cyanide encephalopathy, localization of, *238
Ericsson, J. and O. Höök, malignant thymoma with metastases. a report of three cases, two with myasthenia gravis, *538
Evaluation of two boron-containing drugs for use in the proposed neutron-capture irradiation of gliomas, *415
Everett, N. B., see Hain, R. F., T147
Experimental histopathological studies in metachromatic leucoencephalopathy, T172
— study of diphtheritic polyneuritis in the rabbit and guinea pig. II. the effect of diphtheria toxin on lipide biosynthesis by guinea pig nerve, *7

Facial nucleus, unilateral congenital hypoplasia of, *33
Fahlberg, W. J., see Shaw, Cheng-Mei, T166
Fate of a radio-opaque medium injected into the sciatic nerve, *25

— — radioactive emboli injected into the cerebral circulation, the brain as a filter, *383
Feigin, I., and H. Cravioto, a histochemical difference between myelin in the peripheral and central nervous system, T136
Feigin, I., D137
—, see Cravioto, H., *572
Ferraro, A., acceptance of award, *3, D138, D141, D159, D166
Fine, G., see Sieracki, J. C., *70
Fine, D. I. M., see Barron, K. D., T150
—, K. D. Barron, and A. Hirano, central nervous system lipidosis in an adult with atrophy of the cerebellar granular layer. a case report, *355
Fine structure of cerebral edema, T164
Foley, J. M., see Marin, O. S. M., T137
Freeman, W., D158
Friede, R. L., D135, D144
—, histochemical demonstration of enzyme movements in injured nerve fibers, T143
—, specific cord damage at the atlas level as a pathogenic mechanism in cerebral concussion, *266

Ganglion cells, histopathology of, in senile brain changes, *559
Gardner, W. J., D158
Geller, L. M., see Cowen, D., *448
Gemperlein, J., paraphyseal cysts of third ventricle. report of two cases in infants, *133
Gills, J. P., see Nashold, B. S., Jr., *581
Gliomas, irradiation of, evaluation of two boron-containing drugs for use in the proposed neuron-capture of, *415
—, studies of, in tissue cultures, *449
Gliosis, localized, cerebral, with giant neurons histologically resembling tuberous sclerosis, *572
—, quantitative study of, in degenerating pyramidal tracts, *130
Gonzales-Monteagudo, O., see Purpura, D. P., *421
Gordon, D. S., see Soloway, A. H., *415
Granuloma, cholesterol and xanthoma of the choroid plexus, *280
Greevie, N., concentric lacunar leukoencephalopathy, T173
Greenfield's disease, infantile metachromatic leukodystrophy, *323
Gresham, G. A., and J. G. Cruickshank, pseudohypertrophic muscular dystrophy in later life, *342

Hain, R. F., D145
—, W. O. Rieke, and N. B. Everett, evidence of mitosis in neuroglia as revealed by radioautography employing tritiated thymidine, T147
Hamburgh, M., and E. Vicari, a study of some physiological mechanisms underlying susceptibility to audiogenic seizures in mice, *461
Hawkins, A., and J. Olszewki, quantitative study of gliosis in degenerating pyramidal tracts, *130
Haymaker, W., see Ayres, W. W., *280, D142, D169
Hild, W., myelin formation in vitro, its characteristics and significance, T170
Hugosson, R., and B. Kallén, studies of gliomas in tissue culture, using time-lapse cinematography, *449
Hippocampal end-blade neurons, acute effects of methoxypyridoxine on, *421
Hirano, A., see Fine, D. I. M., *355
Histochemical difference between myelin in the peripheral and central nervous system, T136
— observations on senile plaques, T137
— study of dehydrogenases in the central and peripheral nervous systems, T135
Histologic and chemical studies of cerebral slices metabolizing in vitro, T139
Höök, O., see Ericsson, J., *538
Horn, R. C., see Sieracki, J. C., *70
Hydrocephalus in inbred strains of mice, T169
Hyperplasia of the skull associated with intra-osseous meningioma in the absence of gross tumor, *111

Imagawa, D. T., see Siem, R. A., *125
Infantile metachromatic leukodystrophy (Greenfield's disease), *323
Influenzae, H., meningitis, mechanisms of brain damage in, *248
Influenza virus infections in pregnant mice, *125
Intracranial vascular lesions in diabetes mellitus, T152
Involuntary movement disorders following basal ganglia surgery in man, *228
Iron-containing substances, effects on the central nervous system of subarachnoid injections of, *433
Irradiation of gliomas, proposed neutron-capture of, evaluation of two boron-containing drugs, *415
Iwanowski, L., and J. Olszewski, the effects of subarachnoid injections of iron-containing substances on the central nervous system, *433

Jervis, G. A., infantile metachromatic leucodystrophy (Greenfield's disease), *323, D172

Kallén, B., see Hugosson, R., *449
Karnovsky, M. L., see Majno, G., *7
Kaufman, M. A., C. True, and M. E. Margulies, a primary non-neuroglial malignant neoplasm of the brain. report of two cases, T154
Kies, M. W., see Shaw, Cheng-Mei, T166
Kjellin, K., R. Müller, and K. E. Aström, the occurrence of brain tumors in several members of a family, *528
Klatzo, I., and J. Miquel, observations on pinocytosis in nervous tissue, *475

Koenig, H., D137, D141, D148
—, pathology of the myelopathy produced by a nucleic acid antimetabolite, T162

Landing, B. H., see Smith, J. F., *248
Lapham, L. W., a cytochemical study of the astrocytic hyperplasia in hepatic coma, T144
Leukodystrophy, infantile metachromatic (Greenfield's disease), *323
Levine, S., anoxic-ischemic encephalopathy in rats, T165, D167
Levine, S., localization of allergic encephalomyelitis in lesions of cyanide encephalopathy, *238
Lindenberg, R., D139, D160, D162, D163, D165
Lipide biosynthesis, effect of diphtheria toxin, by guinea pig nerve on, *7
Lipidosis, central nervous system, in an adult with atrophy of the cerebellar granular layer, *355
Liss, L., senile brain changes. histopathology of the ganglion cells, *559
Localized cerebral gliosis with giant neurons histologically resembling tuberous sclerosis, *572
Long-term pathological effects of prenatal x-irradiation on the central nervous system of the rat, *448
Ly, H., see Siem, R. A., *125

Malignant thymoma with metastases. a report of three cases, two with myasthenia gravis, *538
Margulies, M. E., see Kaufman, M. A., T154
Marin, O. S. M., L. C. McHenry, Jr., and J. M. Foley, histochemical observations on senile plaques, T137
Majno, G., B. H. Waksman, and M. L. Karnovsky, experimental study of diphtheritic polyneuritis in the rabbit and guinea pig. II. the effects of diphtheria toxin on lipide biosynthesis by guinea pig nerve, *7
Malamud, N., and Demmy, N., degenerative disease of the subthalamic bodies, *96
—, a degenerative disease of the corpus luysi. clinico-pathologic study of three cases, T161
Matzke, H. A., see Dorang, L. A., *25
McHenry, L. C., Jr., see Marin, O. S. M., T137
Meningioma, intra-osseous, associated with hyperplasia of the skull, *111
Meningitis, H. influenzae, mechanisms of brain damage in, *248
Methoxypyridoxine, acute effects of, on hippocampal end-blade neurons, *421
Miale, I., see Sidman, R. L., T147
Microelectrode, a new micromanipulator for neurophysiological studies, *628
Micromanipulator, new, for neurophysiological microelectrode studies, *628
Mignolet, G., see van Bogaert, L., *351
Miquel, J., see Klatzo, I., *475
Mongoloid crania, post mortem observations on, *554
Moore, M. T., presentation of awards to A. Ferraro, and A. Weil, *1
—, presidential address. some questions concerning vascular disease of the brain, *179
Moossy, J., cerebral thrombosis with sickle cell disease, T152, D155
Movement, involuntary, disorders, following basal ganglia surgery in man, *228
Müller, R., see Kjellin, K., *528
Myasthenia gravis in two cases of malignant thymoma with metastases, *538
Myelin formation in vitro, its characteristics and significance, T170
Myelin sheath contour in normal guinea pig sciatic nerve, *42

Nashold, B. S., Jr., and J. P. Gills, chemical stimulation of telencephalon, diencephalon and mesencephalon in unrestrained animals, *581
Nelson, E., D142
Netsky, M. G., and T. B. Clarkson, the experimental production of arteriosclerosis: response of the avian artery to intramural cholesterol and other insoluble substances, T156
—, see Zettner, A., *305
Neumann, Meta, A., combined amyloid vascular changes and argyrophilic plaques in the central nervous system, *370
Neurological diseases of bears in captivity, *89
Neuromyositis, T150
Neurons, vacuolated, distribution of, in brains of sheep affected with scrapie, *102

Observations on pinocytosis in nervous tissue, *475
Occurrence of brain tumors in several members of a family, *528
Olszewski, J., see Hawkins, A., *130, T153
—, see Iwanowski, L., *433
Odessky, L., D152
—, H. Wigderson, and J. Rosenthal, orbital rhabdomyosarcoma simulating a brain tumor in an adult, T154
Orbital rhabdomyosarcoma simulating a brain tumor in an adult, T154

Pallidum, effect of stimulation of the, on experimental tegmental tremor in the cat, *116
Palmer, A. C., distribution of vacuolated neurons in brains of sheep affected with scrapie, *102
Pandolfi, S., see Clasen, R. A., T164
Paraphyseal cysts of the third ventricle, *133
Pattern of histogenesis in the mouse cerebellum studied by autoradiography, T147

Pentschew, A, D163
Perineuronal satellite cells, effect of x-irradiation, in the cortex of aging brains, *407
Perry, J. H., hydrocephalus in inbred strains of mice, T169
Phase and electron microscopic studies of experimental demyelination. I. variations in myelin sheath contour in normal guinea pig sciatic nerve, *42
Pinocytosis, in nervous tissue, observations on, *475
Polyneuritis, diphtheritic, experimental study in the rabbit and guinea pig, *7
Polyradiculoneuritis, subacute, in a Kamchatka bear, *351
Post mortem observations on mongoloid crania, *554
Potanos, J. N., D136
Potanos, J. N., A. Wolf, and D. Cowen, cytochemical localization of oxidative enzymes in the human central and peripheral nervous systems, T143
Pregnant mice, influenza virus infections in, *125
Pre-natal x-irradiation, effect on central nervous system of rat, *488
Presidential address. some questions concerning vascular disease of the brain, *179
Primary non-neuroglial maligant neoplasm of the brain. report of two cases, T154
Pseudohypertrophic muscular dystrophy in later life, *342
Purpura, D, P., and O. Gonzalez Monteagudo, acute effects of methoxypyridoxine on hippocampal end-blade neurons; an experimental study of "special pathoclisis" in the cerebral cortex, *421
Pyramidal tracts, quantitative study of gliosis in degenerating, *130

Quantitative study of gliosis in degenerating pyramidal tracts, *130

Radiation induced central nervous system death. a study of the pathologic findings in monkeys irradiated with massive doses of cobalt 60 (gamma) radiation, *195
Radioactive emboli injected into the cerebral circulation, the brain as a filter, fate of, *383
Radio-opaque medium, injected into the sciatic nerve fate of, *25
Rat, effect of pre-natal x-irradiation on central nervous system of, *488
Review of ultracellular structures and their functions with special reference to pathogenic mechanisms at a molecular level, *591
Richardson, E. P., D172, D173
Richter, R. B., unilateral congenital hypoplasia of the facial nucleus, *33
Rieke, W. O., see Hain, R. F., T147
Riggs, H. E., see Wagman, A. D., *111, D151, D157
Roche, A. F., and S., Sunderland, post mortem observations on mongoloid crania, *554
Roizin, L., a review of ultracellular structures and their functions with special reference to pathogenic mechanisms at a molecular level, *591, T168
Romanul, F. C. A., and R. B. Cohen, a histochemical study of dehydrogenases in the central and peripheral nervous systems, T135
—, D143, D168
Rosenthal, J., see Odessky, L., T154
Roth, L. J., see Schoolar, J. C., *216, T146

Satellite cells, perineuronal, in the cortex of the aging brain, effects of x-irradiation on the, *407
Schachter, J. M., G. Bravo, and I. S. Cooper, involuntary movement disorders following basal ganglia surgery in man, *228
Scharenberg, K., D138, D143
—, the structure of the glia of the human sympathetic chain and their relationship to the neurons, T157
—, the silver carbonate technique for the impregnation of the astroglia, *622
Schodlar, J. C., C. F. Barlow, and L. J. Roth, the penetration of carbon-14 urea into cerebrospinal fluid and various areas of the cat brain, *216, T146
Sciatic nerve, fate of radio-opaque medium injected into, *25
Scrapie, distribution of vacuolated neurons in brains of sheep affected with, *102
Seizures, audiogenic in mice, study of some physiological mechanism underlying susceptibility to, *461
Senile brain changes. histopathology of the ganglion cells, *559
Shaw, Cheng-Mei, W. J. Fahlberg, M. W. Kies, and E. C. Alvord, Jr., suppression of experimental "allergic" encephalomyelitis in guinea pigs by encephalitogenic proteins extracted from homologous brain and by tuberculin, T166
Sherman, F., see Zeman, W., *76
Sidman, R. L., and I. Miale, pattern of histogenesis in the mouse cerebellum studied by autoradiography, T147
Siem, R. A., H. Ly, D. T. Imagawa, and J. M. Adams, influenza virus infections in pregnant mice, *125
Sieracki, J. C., G. Fine, R. C. Horn, and J. Bebin, central nervous system involvement in Whipple's disease, *70
Silver carbonate technique for the impregnation of the astroglia, *622
Skull, hyperplasia of the, associated with intra-osseous meningioma in the absence of brain tumor, *111
Smith, J. F., and B. H. Landing, mechanisms of brain damage in H. influenzae meningitis, *248

Snyder, R. S., D147
Soloway, A. H., and D. S. Gordon, evaluation of two boron-containing drugs for use in the proposed neutron-capture irradiation of gliomas, *415
Spiegel, E. A., see Alexander, G. L., *116
Spiro, D., see Webster, H. D. F., *42, T149
Stevenson, L. D., D157
Stimulation, chemical, of brain in unrestrained animals, *581
Stochdorph, O., D159
Striopallidal-nigral degeneration. an hitherto undescribed lesion in paralysis agitans, T159
Structures of the glia of the human sympathetic chain and their relationship to the neurons, T157
Studies of gliomas in tissue culture, using time-lapse cinematography, *449
Study of some physiological mechanisms underlying susceptibility to audiogenic seizures in mice, *461
Subacute polyradiculoneuritis in a Kamchatka bear, *351
Subarachnoid injections of iron-containing substances on the central nervous system, effects of, *433
Subthalamic bodies, degenerative disease of, *96
Sunderland, S., see Roche, A. F., *554
Suppression of experimental "allergic" encephalomyelitis in guinea pigs by encephalitogenic proteins extracted from homologous brain and by tuberculin, T166
Szekely, E. G., see Alexander, G. L., *116

Terry, R. D., see Torack, R. M., T164, D165
Third ventricle, paraphyseal cysts of, *133
Thymoma, malignant with metastases, *538
Tissue culture studies of gliomas, in, *449
Torack, R. M., R. D. Terry, and H. M. Zimmerman, the fine structure of cerebral edema, T164
Tremor, experimental tegmental in the cat, effect of stimulation of the pallidum on, *116
True, C., see Kaufman, M. A., T154
Tuberous sclerosis, localized cerebral gliosis with giant neurons, resembling, *572
Tyler, S., see Clasen, R. A., T164

Ultracellular structures and their functions with special reference to pathogenic mechanisms at a molecular level, a review of, *591
Unilateral congenital hypoplasia of the facial nucleus, *33
Unusual Case of primary demyelinating disease, *76
Urea, carbon-14, penetration into cerebrospinal fluid, *216
Uzman, L. L., D135, D148
—, the development of neonatal mouse cerebellum studied by tritiated-thymidine uptake, T146

Van Bogaert, L., neurologic diseases of bears in captivity, *89
—, see Vander Eecken, H., T159
—, and G. Mignolet, subacute polyradiculoneuritis in a Kamchatka bear, *351
Vander Eecken, H., R. D. Adams, and L. van Bogaert, striopallidal-nigral degeneration. an hitherto undescribed lesion in paralysis agitans, T159
Vascular disease of the brain, some questions concerning, *179
Vastola, E. F., non-hemorrhagic xanthochromia of cerebrospinal fluid, *296
Vicari, E., see Hamburgh, M., *461
Victor, M., see Dreyfus, P. M., T170
Virus, influenza, infections in pregnant mice, *125

Wagman, A. D., E. K. Weiss, and H. E. Riggs, hyperplasia of the skull associated with intra-osseous meningioma in the absence of gross tumor, *111, T157
Waksman, B. H., see Majno, G., *7
Webster, H. D F., and D. Spiro, phase and electron microscopic studies of experimental demyelination. I. variations in myelin sheath contour in normal guinea pig sciatic nerve, *42, T149
Weil, A., acceptance of award, *5
Weiss, E. K., see Wagman, A. D., *111, T157
Whipple's disease, central nervous system involvement, in, *70
Wigderson, H., see Odessky, L., T154
Wilson, S. G., radiation induced central nervous system death, a study of the pathologic findings in monkeys irradiated with massive doses of cobalt 60 (gamma) radiation, *195
Wolf, A., see Potanos, J. N., T143, D156

Xanthoma and cholesterol granuloma of the choroid plexus, *280
Xanthochromia, non-hemorrhagic of cerebrospinal fluid, *296
X-irradiation, effect of, on the perineuronal satellite cells in the cortex of aging brains *407

Zeman, W., and F. Sherman, an unusual case of primary demyelinating disease, *76
—, D163
Zettner, A., and M. G. Netsky, lipoma of the corpus callosum, *305
Zimmerman, H., D155, D156,
—, see Torack, R. M., T164